



FEATURES

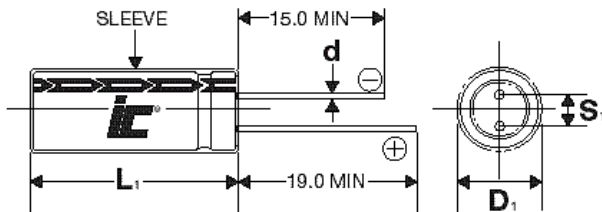
High Capacitance – Very fast charge/discharge – High power density

APPLICATIONS

Battery backup/ alternative – LED Displays – DC/DC converters – Pulse power

| | | | |
|--|-------------|---------------------------|--|
| Operating Temperature Range | | -25°C to +70°C | |
| Storage Temperature | | -40°C to +70°C | |
| Capacitance Tolerance | | +50%/-20% @ 25°C | |
| Voltage | WVDC | 2.5 | |
| | SVDC | 2.7 | |
| Maximum Current | | See standard part listing | 0.5*WVDC/(ESR_{DC}+(1/C)) |
| Leakage Current | | See standard part listing | 72 hours, 25°C |
| 1000 hours at rated voltage and 70°C | | | |
| Life time | | Capacitance change | ±30% of initially measured values |
| | | ESR | ≤200% of initially specified values |
| 500,000 cycles | | | |
| Life cycles (25°C) 1 cycle= Charge to WVDC for 20s, constant voltage charging for 10s, discharge to ½ WVDC for 20s, rest for 10 s | | Capacitance change | ±30% of initially measured values |
| | | ESR | ≤200% of initially specified values |

D= 8 to 18mm



| Lead spacing VS. Case diameter | | | | | |
|--------------------------------|---------|---------|-----|-----|-----|
| D | 8(L>20) | 8(L>20) | 10 | 16 | 18 |
| S | 3.5 | 3.5 | 5.0 | 7.5 | 7.5 |
| d | 0.5 | 0.6 | 0.6 | 0.8 | 0.8 |

L₁=L(<20mm +1.5mm) (≥20mm +2.0mm)
 D₁=D(<20mm +0.5mm) (≥20mm +1.0mm)
 S₁=S±0.5mm

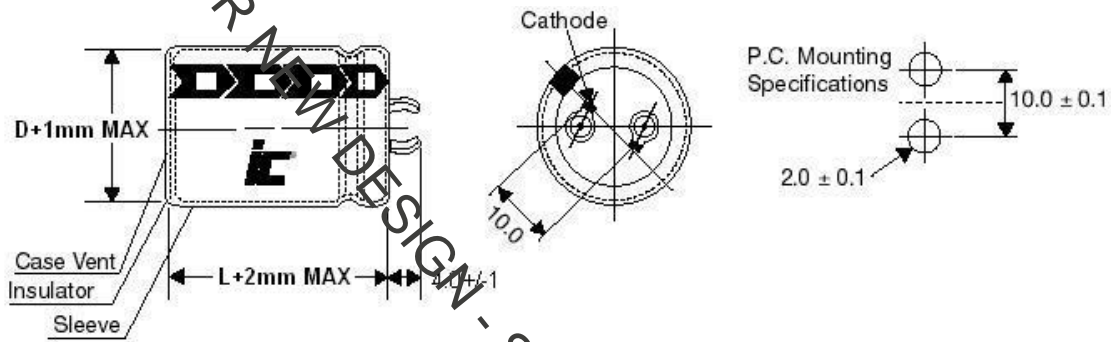
DER

Radial Leaded Super Capacitors

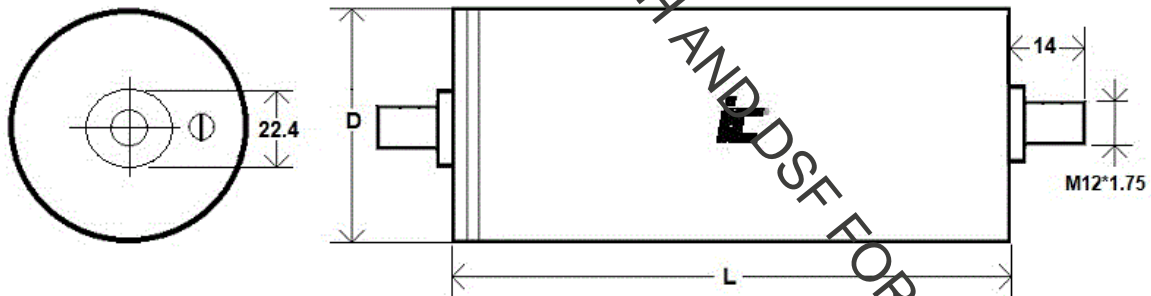


Snap in types

$$20\text{mm} \leq D < 60\text{mm}$$



Capacitance = 500F to 650F



NOT RECOMMENDED FOR NEW DESIGN

DER Radial lead, +70°C

| WVDC | Capacitance (F) | IC PART NUMBER | MAX Current (A) | Maximum Continuous Current (A) ($\Delta T=15^{\circ}C$) | Short Circuit Current (A) | ESR AC 1 kHz (m Ω) | DC ESR (m Ω) 20°C | Max stored energy (mWh) | LC (mA), (72 hrs) | Energy Density (Wh/kg) | Energy Volumetric Density (Wh/l) | Power Density (kW/kg) | Power Volumetric Density (kW/l) |
|------|-----------------|----------------|-----------------|---|---------------------------|----------------------------|---------------------------|-------------------------|-------------------|------------------------|----------------------------------|-----------------------|---------------------------------|
| 2.5 | 1.0 | 206DER2R5SFN | 0.63 | 500 | 1000 | 500 | 1000 | 0.868 | 0.008 | 1.0117 | 1.4391 | 0.8741 | 1.2434 |
| 2.5 | 2.0 | 205DER2R5SFQ | 1.19 | 350 | 550 | 350 | 550 | 1.736 | 0.01 | 1.6001 | 2.1587 | 1.2568 | 1.6955 |
| 2.5 | 3.0 | 305DER2R5SFU | 1.91 | 200 | 320 | 200 | 320 | 2.604 | 0.012 | 2.075 | 2.5904 | 1.8675 | 2.3314 |
| 2.5 | 3.3 | 335DER2R5SGU | 2.01 | 200 | 320 | 200 | 320 | 2.865 | 0.014 | 1.3641 | 1.8237 | 1.1161 | 1.4921 |
| 2.5 | 4.7 | 475DER2R5SGU | 2.49 | 180 | 290 | 180 | 290 | 4.08 | 0.016 | 1.7997 | 2.5973 | 1.1408 | 1.6464 |
| 2.5 | 7.0 | 705DER2R5SGV | 3.44 | 140 | 220 | 140 | 220 | 6.076 | 0.02 | 2.3736 | 3.0947 | 1.3317 | 1.7362 |
| 2.5 | 10.0 | 106DER2R5SGV | 5 | 100 | 150 | 100 | 150 | 8.681 | 0.03 | 2.7957 | 3.6841 | 1.6103 | 2.1221 |
| 2.5 | 10.0 | 106DER2R5STV | 4.81 | 100 | 160 | 100 | 160 | 8.681 | 0.03 | 2.4887 | 2.8294 | 1.3439 | 1.5279 |
| 2.5 | 22.0 | 226DER2R5SKV | 8.59 | 60 | 100 | 60 | 100 | 19.097 | 0.06 | 2.6639 | 3.7993 | 1.0462 | 1.4921 |
| 2.5 | 30.0 | 306DER2R5SKW | 12.1 | 40 | 70 | 40 | 70 | 26.042 | 0.07 | 3.1486 | 4.3174 | 1.2954 | 1.7763 |
| 2.5 | 50.0 | 506DER2R5SLZ | 17.3 | 30 | 50 | 30 | 50 | 43.403 | 0.16 | 3.061 | 4.2641 | 1.058 | 1.4737 |
| 2.5 | 100.0 | 107DER2R5SBG | 27.8 | 25 | 35 | 25 | 35 | 86.806 | 0.3 | 4.4379 | 5.0746 | 1.0955 | 1.2527 |
| 2.5 | 100.0 | 107DER2R5SLB | 27.8 | 25 | 35 | 25 | 35 | 86.806 | 0.3 | 4.1613 | 5.6854 | 1.0273 | 1.4035 |
| 2.5 | 150.0 | 157DER2R5SCP | 34.1 | 22 | 30 | 22 | 30 | 130.207 | 0.55 | 3.8523 | 4.8229 | 0.7396 | 0.926 |
| 2.5 | 200.0 | 207DER2R5SDH | 7.4 | 20 | 25 | 20 | 25 | 173.611 | 0.7 | 4.4075 | 4.9122 | 0.7616 | 0.8488 |
| 2.5 | 250.0 | 257DER2R5SDP | 48.1 | 18 | 22 | 18 | 22 | 217.014 | 0.8 | 4.4977 | 5.582 | 0.7065 | 0.8769 |
| 2.5 | 350.0 | 357DER2R5SEZ | 70 | 12 | 15 | 12 | 15 | 303.819 | 1 | 4.5818 | 5.2631 | 0.754 | 0.8661 |
| 2.5 | 500.0 | 507DER2R5SEW | 89 | 10 | 12 | 10 | 12 | 434.028 | 1.3 | 3.7 | 4.7486 | 0.5328 | 0.6838 |
| 2.5 | 650.0 | 657DER2R5SZZ | 502 | 0.8 | 0.95 | 0.8 | 0.95 | 564.236 | 2.3 | 2.5 | 3.326 | 3.498 | 4.6537 |

SEE DGH AND DSF FOR POSSIBLE REPLACEMENT

| | |
|------------|--------------------|
| DER | Radial lead, +70°C |
|------------|--------------------|

| WVDC | Capacitance (F) | IC PART NUMBER | Weight (grams) | Volume (mL) | Dims DxL (mm) | Lead Spacing S (mm) | Lead Diameter d (mm) |
|------|-----------------|----------------|----------------|-------------|---------------|---------------------|----------------------|
| 2.5 | 1.0 | 105DER2R5SFN | 0.858 | 0.603 | 8x12 | 3.5 | 0.5 |
| 2.5 | 2.0 | 205DER2R5SFQ | 1.085 | 0.804 | 8x16 | 3.5 | 0.5 |
| 2.5 | 3.0 | 305DER2R5SFU | 1.255 | 1.005 | 8x20 | 3.5 | 0.6 |
| 2.5 | 3.3 | 335DER2R5SGU | 2.1 | 1.571 | 10x20 | 5 | 0.6 |
| 2.5 | 4.7 | 475DER2R5SGU | 2.267 | 1.571 | 10x20 | 5 | 0.6 |
| 2.5 | 7.0 | 705DER2R5SGV | 2.56 | 1.963 | 10x25 | 5 | 0.6 |
| 2.5 | 10.0 | 106DER2R5SGW | 3.105 | 2.356 | 10x30 | 5 | 0.6 |
| 2.5 | 10.0 | 106DER2R5STV | 3.488 | 3.068 | 12.5x25 | 5 | 0.6 |
| 2.5 | 20.0 | 226DER2R5SKV | 7.169 | 5.027 | 16x25 | 7.5 | 0.8 |
| 2.5 | 30.0 | 306DER2R5SKW | 8.271 | 6.032 | 16x30 | 7.5 | 0.8 |
| 2.5 | 50.0 | 506DER2R5SLZ | 13.01 | 10.179 | 18x40 | 7.5 | 0.8 |
| 2.5 | 100.0 | 107DER2R5SBG | 19.56 | 17.106 | 22x45 | 10 | 0 |
| 2.5 | 100.0 | 108DER2R5SLB | 20.86 | 15.268 | 18x60 | 7.5 | 7.5 |
| 2.5 | 150.0 | 157DER2R5SCP | 33.8 | 26.998 | 25x55 | 10 | 0 |
| 2.5 | 200.0 | 207DER2R5SDH | 39.39 | 35.343 | 30x50 | 10 | 1.5 |
| 2.5 | 250.0 | 257DER2R5SDP | 48.25 | 38.877 | 30x55 | 10 | 1.5 |
| 2.5 | 350.0 | 357DER2R5SEZ | 66.31 | 57.727 | 35x60 | 0 | 0 |
| 2.5 | 500.0 | 507DER2R5SEW | 117.3 | 91.4 | 35x95 | 0 | 0 |
| 2.5 | 650.0 | 657DER2R5SZZ | 225.7 | 169.65 | 60x60 | 0 | 0 |

NOT RECOMMENDED FOR NEW DESIGN. SEE DGH AND DSF FOR POSSIBLE REPLACEMENT